



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR L586 069044-1761
Component
Front Differential
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0267643	LHMC155715	---
Sample Date		Client Info		22 Nov 2023	27 Oct 2022	---
Machine Age	hrs	Client Info		1985	760	---
Oil Age	hrs	Client Info		0	760	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	Not Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>1500	174	253	---
Chromium	ppm	ASTM D5185m	>10	2	3	---
Nickel	ppm	ASTM D5185m	>4	<1	0	---
Titanium	ppm	ASTM D5185m	>5	0	<1	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>20	1	4	---
Lead	ppm	ASTM D5185m	>5	0	0	---
Copper	ppm	ASTM D5185m	>200	71	167	---
Tin	ppm	ASTM D5185m	>10	5	10	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	MODER	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

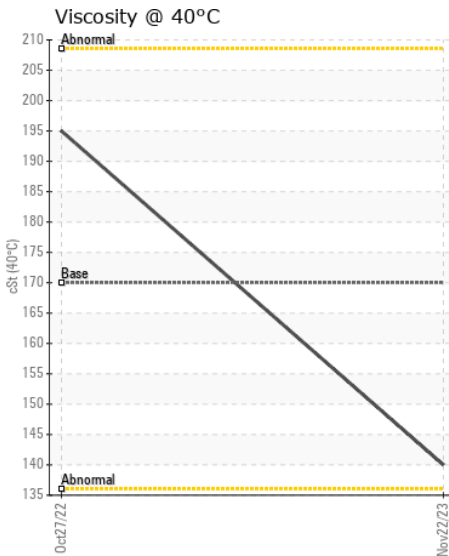
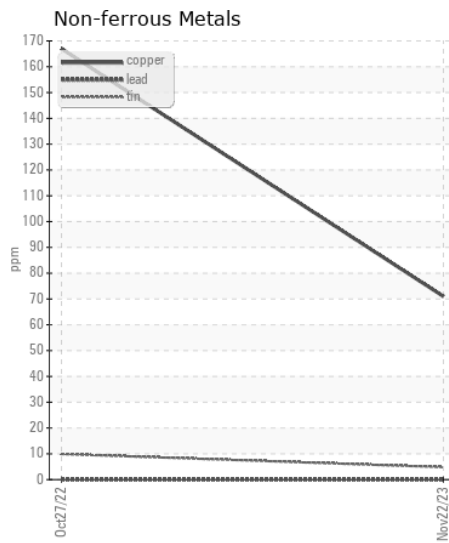
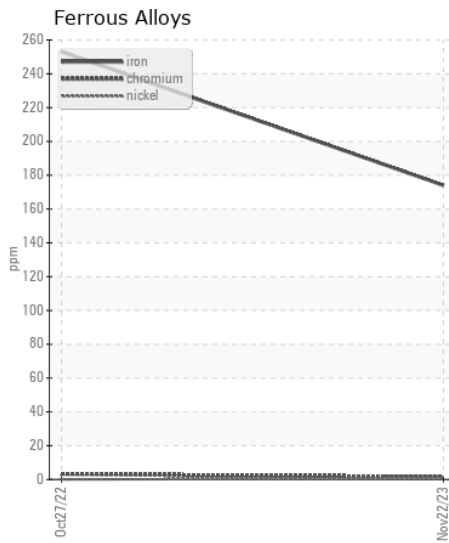
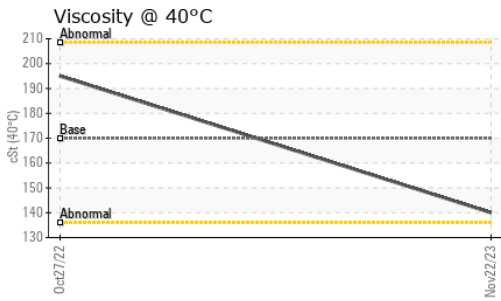
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	15	29	---
Potassium	ppm	ASTM D5185m	>20	<1	2	---
Water		WC Method	>.2	NEG	NEG	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>.2	NEG	NEG	---

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		2	10	---
Boron	ppm	ASTM D5185m	0	7	2	---
Barium	ppm	ASTM D5185m	0	0	2	---
Molybdenum	ppm	ASTM D5185m	0	0	<1	---
Manganese	ppm	ASTM D5185m	0	20	56	---
Magnesium	ppm	ASTM D5185m	<1	0	2	---
Calcium	ppm	ASTM D5185m	<1	13	14	---
Phosphorus	ppm	ASTM D5185m	2143	1137	2370	---
Zinc	ppm	ASTM D5185m	<1	23	56	---
Sulfur	ppm	ASTM D5185m	23468	21209	33107	---
Visc @ 40°C	cSt	ASTM D445	170	140	195	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0267643 **Received** : 12 Jan 2024
Lab Number : 06060503 **Diagnosed** : 16 Jan 2024
Unique Number : 10831885 **Diagnostician** : Don Baldrige
Test Package : CONST

MIDDLE RIVER MARINE
 1771 SOUTH TORRENCE AVE
 CHICAGO, IL
 US 60617
 Contact: Scott Molitor
 scottmolitor@gomiddleriver.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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F: